

THE CLAIMS

The claims currently pending in the application are as follows:

1. (currently amended) An organic light emitting diode device, comprising:
 - a substrate;
 - a first electrode formed on the substrate;
 - an organic electroluminescent function layer formed on the substrate;
 - a trench wall pattern formed on the function layer, such that (i) said trench wall forms a pattern on said function layer, and (ii) a portion of the function layer resides directly underneath said trench wall; and
 - a second electrode layer formed on the function layer and the trench wall patternwherein a doping concentration in the said portion of function layer under a residing directly underneath said trench wall ~~forming the trench pattern~~ is lower than in other portions of the function layer.
2. (original) The organic electroluminescent device according to claim 1,
 - wherein the function layer contains any one of polymer and oligomer, each having an amine derivative structure.
3. (currently amended) The organic electroluminescent device according to claim 1,
 - wherein different types of dopant are contained in areas of the function layer, the areas being adjacent to each other while being spaced by said trench wall ~~a wall of the trench pattern~~.
4. Canceled
5. (currently amended) A method for manufacturing an organic light emitting diode device, the method comprising the steps of:

forming a first electrode on a substrate;
forming an organic electroluminescent function layer on the electrode;
forming a trench ~~pattern~~ wall on said organic electroluminescent function layer, such that (i) said trench wall forms a pattern on said organic electroluminescent function layer, and (ii) a portion of said organic electroluminescent function layer resides directly underneath said trench wall;
performing doping for the function layer by supplying a dopant solution along the trench wall pattern wherein a doping concentration in the said portion of organic electroluminescent function layer residing directly underneath said trench wall is lower than in other portions of the organic electroluminescent function layer; and
forming a second electrode layer on the function layer and the trench pattern.

6. (currently amended) The manufacturing method according to claim 5,

wherein the step of forming a trench pattern includes the steps of:

forming a photoresist layer on the function layer; and patterning the photoresist layer to form the trench wall pattern.

7. (currently amended) The manufacturing method according to claim 5, further comprising the step of introducing, along the trench wall pattern, at least a second function layer having a composition different from a composition of the function layer.

8. Canceled.

9. (currently amended) The manufacturing method according to claim 5,

wherein the step of performing doping for the function layer by supplying a dopant solution includes the steps of:

supplying the dopant solution along the trench wall pattern; and dispersing the dopant into the function layer by heating the function layer.

10. (currently amended) The manufacturing method according to claim 5,

wherein the step of performing doping includes the step of supplying different types of dopant into areas of the function layer, the areas being spaced by a wall of the trench wall pattern.

11 - 12. Canceled.